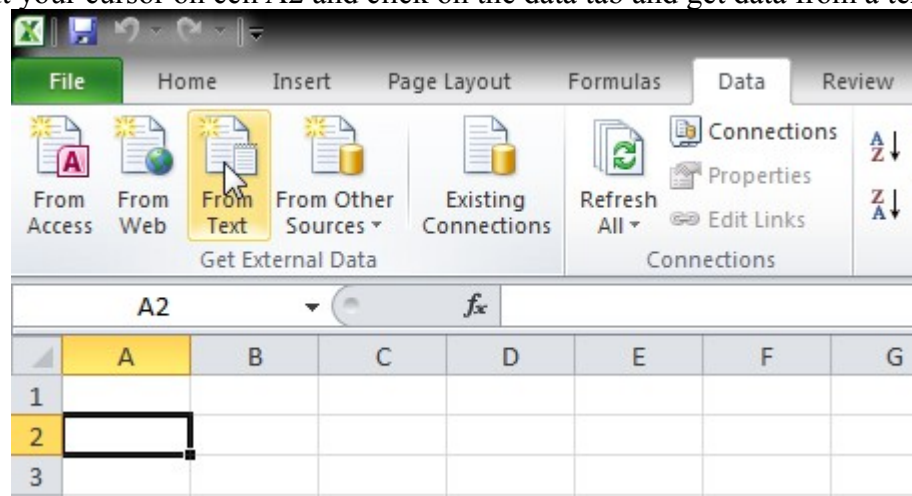


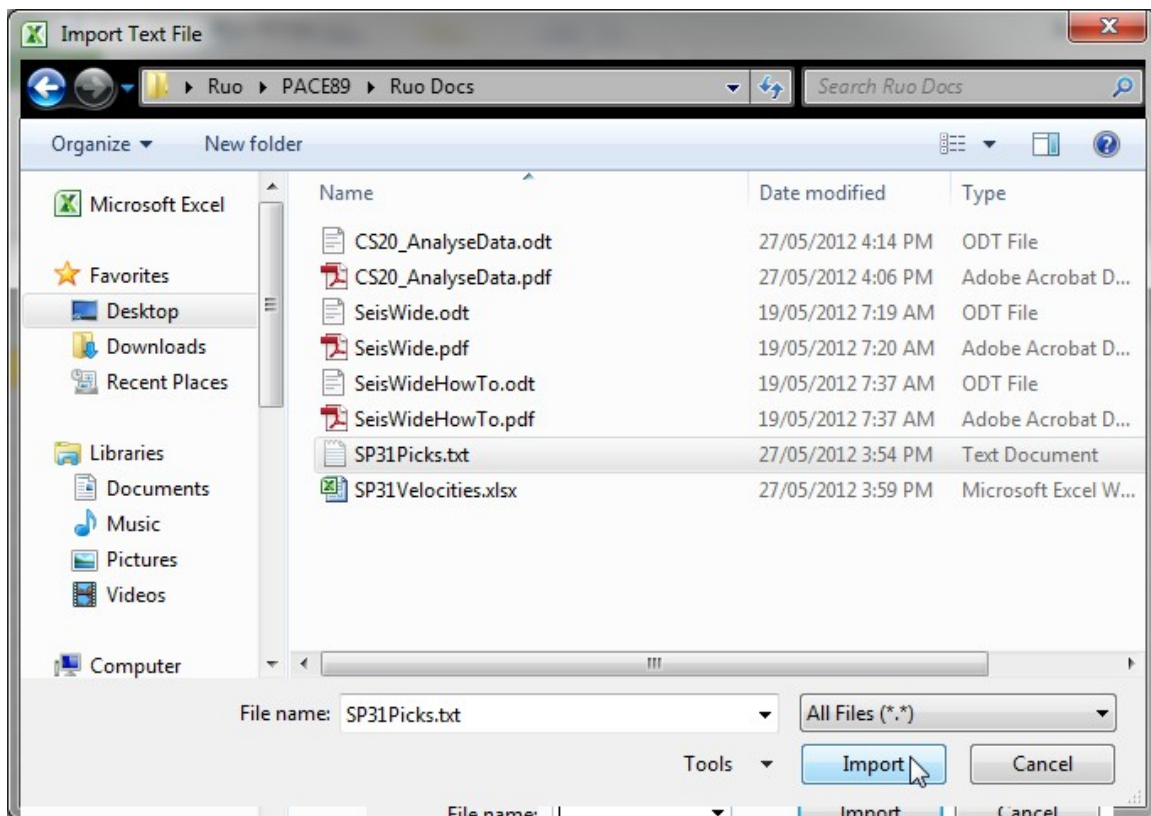
## Determining Velocities with Excel

Once you have your picks from SeisWide stored in a text file, you can use Excel to analyse the results and compute velocities of the waves.

From Excel, put your cursor on cell A2 and click on the data tab and get data from a textfile



Next, browse to the picks file and import it



Click on Delimited, then click on Next

Text Import Wizard - Step 1 of 3

The Text Wizard has determined that your data is Fixed Width.  
If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

☒ Delimited - Characters such as commas or tabs separate each field.

☐ Fixed width - Fields are aligned in columns with spaces between each field.

Start import at row:  File origin:

Preview of file C:\Users\yuol\Desktop\Ruo\PACE89\Ruo Docs\SP31Picks.txt.

1	8.576	2.307	1 Pg
2	10.318	2.753	1 Pg
3	13.400	3.423	1 Pg
4	15.678	3.795	1 Pg
5	18.090	4.316	1 Pg

Cancel < Back Next > Finish

Check off only space (the data columns are separated by the space character, notice the preview of the data in columns):

Text Import Wizard - Step 1 of 3

This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

Delimiters

☐ Tab

☐ Semicolon

☐ Comma

☒ Space

☐ Other:

☒ Treat consecutive delimiters as one

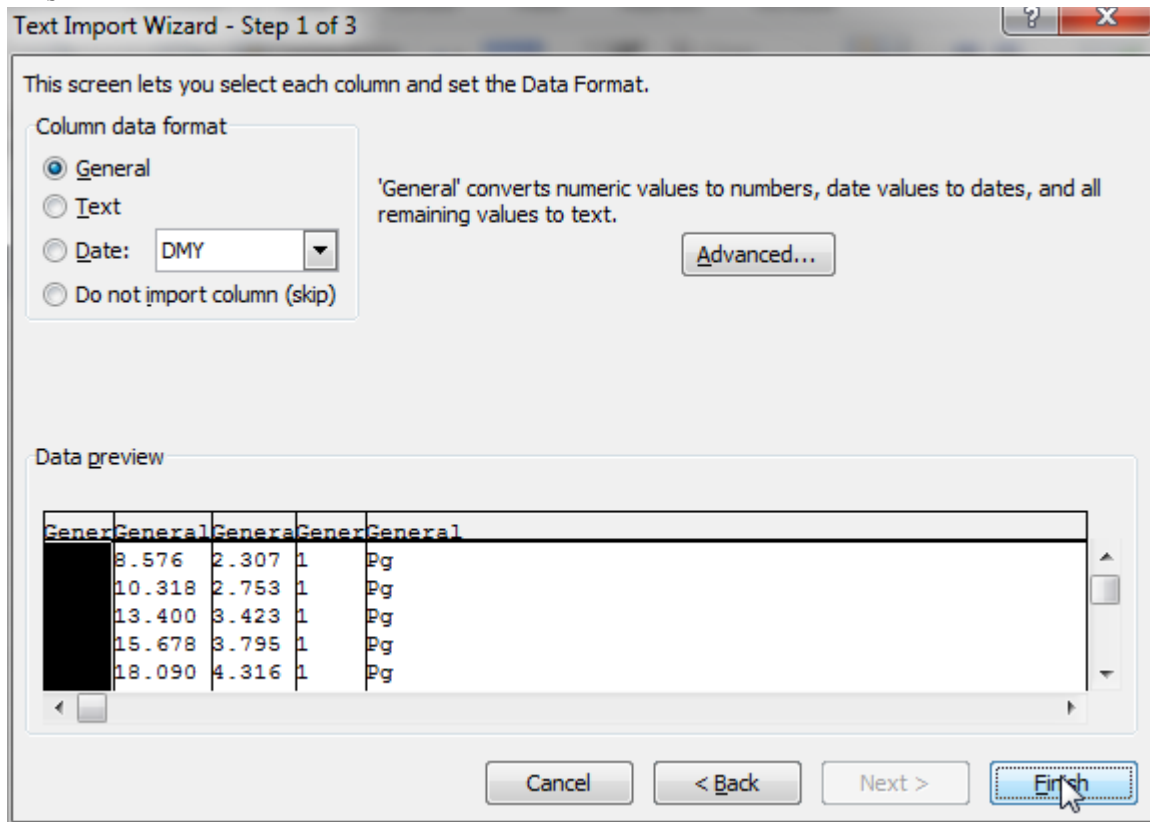
Text qualifier:

Data preview

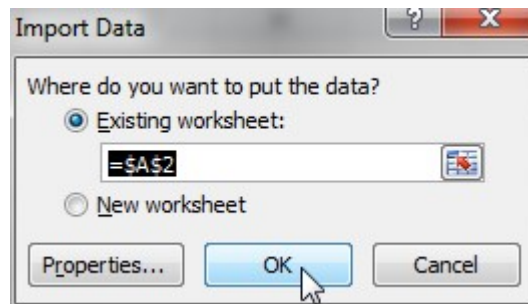
8.576	2.307	1	Pg
10.318	2.753	1	Pg
13.400	3.423	1	Pg
15.678	3.795	1	Pg
18.090	4.316	1	Pg

Cancel < Back Next > Finish

Click Finish



Click OK (it will put the imported data into Cell A2)

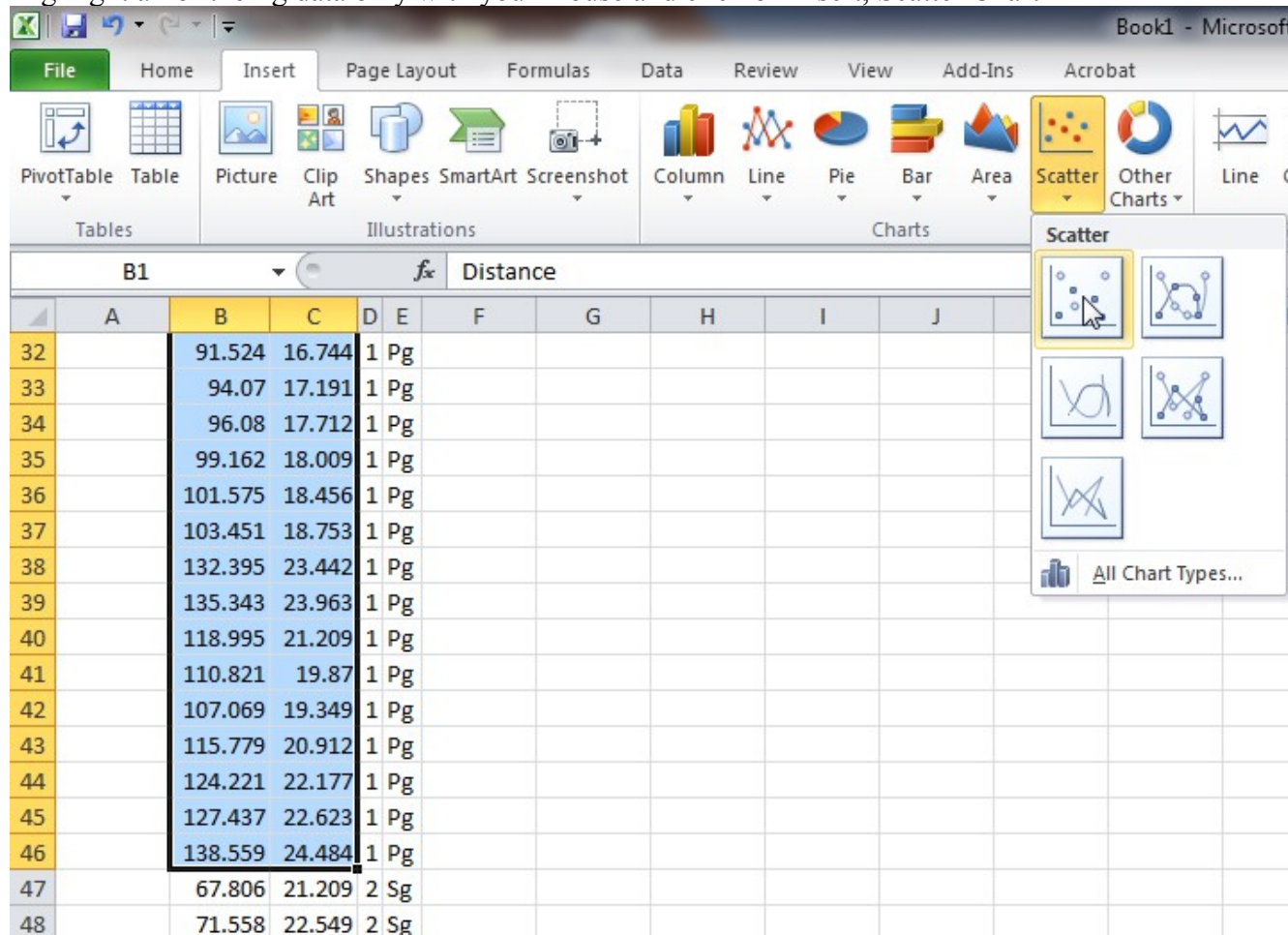


Your data now appears in the Excel worksheet:

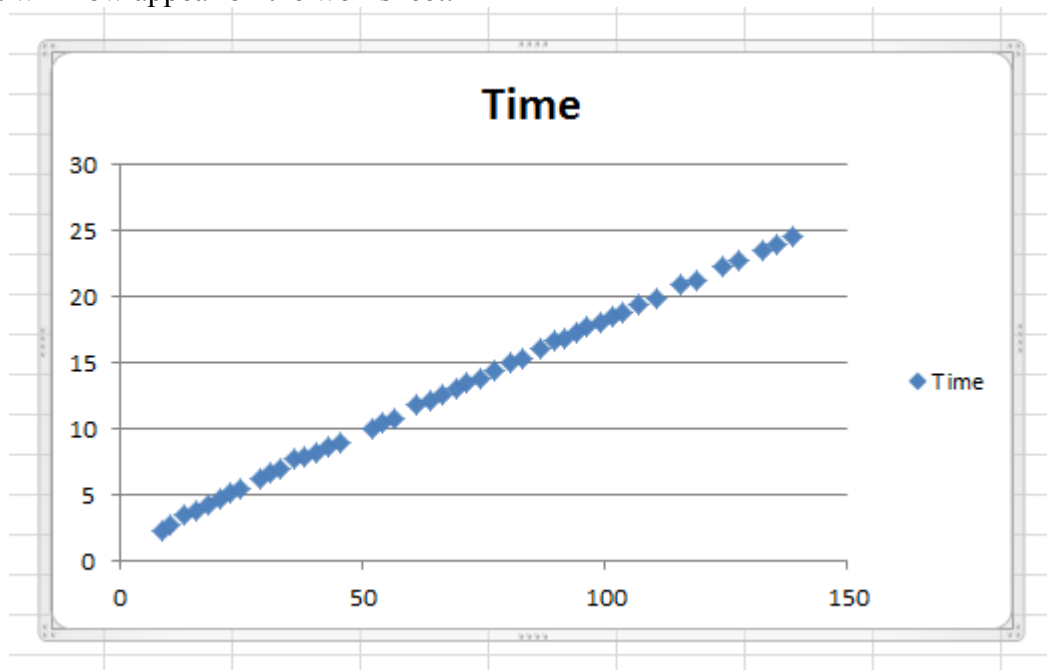
	A	B	C	D	E	F
1		Distance	Time			
2		8.576	2.307	1	Pg	
3		10.318	2.753	1	Pg	

Add the column headings

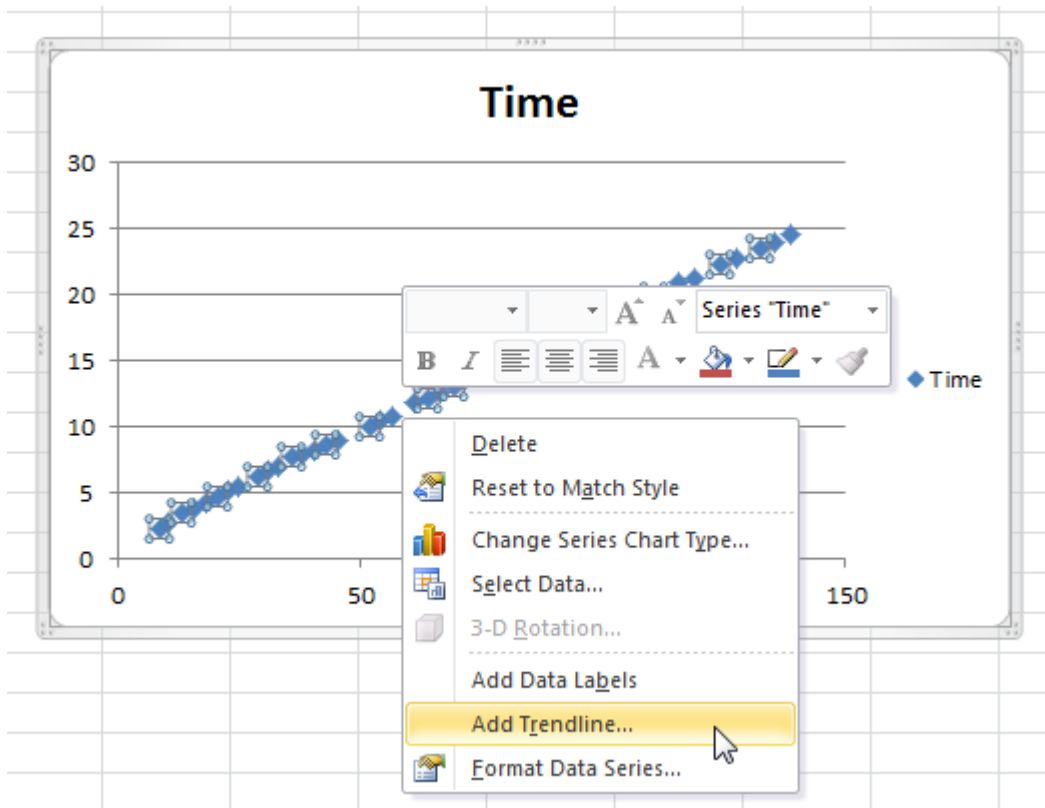
Highlight all of the Pg data only with your mouse and click on Insert, Scatter Chart



Your chart will now appear on the worksheet:



Left click on the data points, then right click and add a trend line

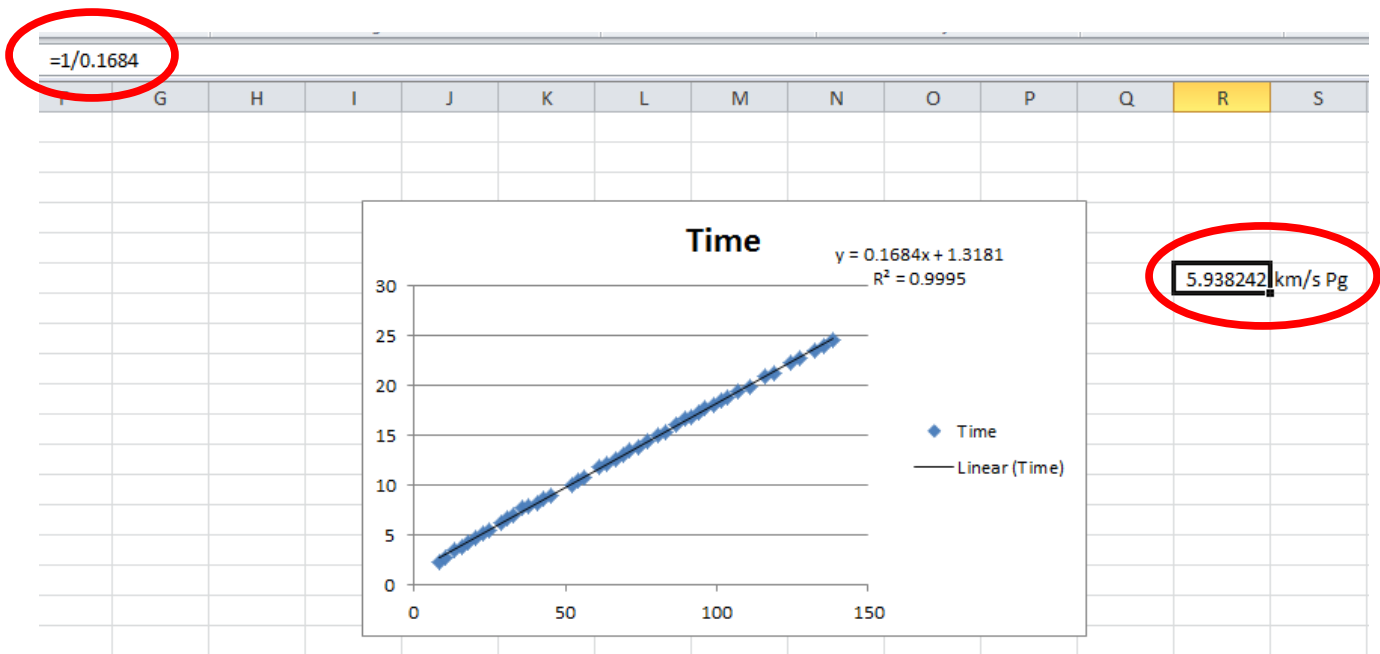


Check off Display Equation and R-squared value

click Close

The "Format Trendline" dialog box is shown with the "Trendline Options" tab selected. The "Trend/Regression Type" section has the following options: Exponential, Linear (selected), Logarithmic, Polynomial (Order: 2), Power, and Moving Average (Period: 2). The "Trendline Name" section has "Automatic: Linear (Time)" selected. The "Forecast" section has "Forward: 0.0 periods" and "Backward: 0.0 periods". The "Set Intercept = 0.0" checkbox is unchecked. The "Display Equation on chart" and "Display R-squared value on chart" checkboxes are checked. A "Close" button is at the bottom right.

You will now see this



I moved the equation to an open area of the chart. The slope is equal to the slowness of the wave (in this case, the p-wave). To find the speed of the wave, we need to take the reciprocal of the slope. I did this in a cell to the right of the chart and added some annotation.

I typed

$=1/0.1684$

into the cell – that gives the result of 5.938

Repeat this for the Sg data.